

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A substrate (1), ~~especially a glass substrate~~, coated with at least one dielectric thin-film layer deposited by sputtering, ~~especially magnetically enhanced sputtering and preferably reactive sputtering in the presence of oxygen and/or nitrogen,~~ with exposure to at least one ion beam (3) coming from an ion source (4), ~~characterized in that wherein~~ said dielectric layer exposed to the ion beam has a refractive index that can be adjusted according to parameters of the ion source, said ion source being a linear source.

Claim 2 (Currently Amended): The substrate (1) as claimed in claim 1, ~~characterized in that wherein~~ the density of the dielectric layer deposited on the substrate by sputtering with exposure to the ion beam is maintained.

Claim 3 (Currently Amended): The substrate (1) as claimed in claim 1 ~~or claim 2~~, ~~characterized in that wherein~~ the dielectric layer exposed to the ion beam has a refractive index close to the index of a layer deposited without an ion beam.

Claim 4 (Currently Amended): The substrate (1) as claimed in ~~any one of the preceding claims~~ claim 1, ~~characterized in that wherein~~ the dielectric layer exposed to the ion beam has a refractive index greater than the index of a layer deposited without an ion beam.

Claim 5 (Currently Amended): The substrate (1) as claimed in ~~any one of claims 1 to 3~~, ~~characterized in that claim 1, wherein~~ the dielectric layer exposed to the ion beam has a refractive index less than the index of a layer deposited without an ion beam.

Claim 6 (Currently Amended): The substrate (1) as claimed in ~~any one of the preceding claims, characterized in that claim 1, wherein~~ said layer has an index gradient adjusted according to parameters of the ion source layer.

Claim 7 (Currently Amended): The substrate (1) as claimed in ~~any one of the preceding claims, characterized in that claim 1, wherein~~ said dielectric layer is made of a metal oxide or silicon oxide, whether stoichiometric or nonstoichiometric, or made of a metal nitride or oxynitride or silicon nitride or oxynitride.

Claim 8 (Currently Amended): The substrate (1) as claimed in ~~any one of claims 1 to 7, characterized in that claim 1, wherein~~ said dielectric layer is made of an oxide of at least one element ~~taken from selected from the group consisting of~~ silicon, zinc, tantalum, titanium, tin, aluminum, zirconium, niobium, indium, cerium, and tungsten.

Claim 9 (Currently Amended): The substrate (1) as claimed in claim 8, characterized in that ~~wherein~~ the layer is made of zinc oxide and has a refractive index of less than or equal to 1.95, ~~especially of 1.85 to 1.95~~.

Claim 10 (Currently Amended): The substrate (1) as claimed in claim 8 or 9, characterized in that ~~wherein~~ the layer is made of zinc oxide and has a density of around 5.3 g/cm^3 .

Claim 11 (Currently Amended): The substrate (1) as claimed in ~~any one of claims 1 to 7, characterized in that claim 1, wherein~~ said dielectric layer is made of silicon nitride or oxynitride.

Claim 12 (Currently Amended): The substrate (1) as claimed in ~~any one of the preceding claims, characterized in that claim 1, wherein~~ said layer has an argon content of around 0.2 to 0.6 at%.

Claim 13 (Currently Amended): The substrate (1) as claimed in ~~any one of the preceding claims, characterized in that claim 1, wherein~~ said layer has an iron content of less than or equal to 3 at%.

Claim 14 (Currently Amended): The substrate (1) as claimed in ~~any one of the preceding claims, characterized in that it~~ claim 1, which is coated with a multilayer in which a silver layer is placed on top of said dielectric layer exposed to the ion beam.

Claim 15 (Currently Amended): The substrate (1) as claimed in claim 14, ~~characterized in that wherein another~~ a second dielectric layer is placed on top of the silver layer.

Claim 16 (Currently Amended): The substrate (1) as claimed in claim 14 or 15, ~~characterized in that wherein~~ the multilayer includes at least two silver layers.

Claim 17 (Currently Amended): The substrate (1) as claimed in ~~any one of claims 14 to 16, characterized in that it~~ claim 14, wherein the substrate has a surface resistance R_s of less than $6 \Omega / \square$, ~~or even less than $2.1 \Omega / \square$, especially around $1.9 \Omega / \square$.~~

Claim 18 (Currently Amended): A glazing assembly, ~~and especially a double-glazing assembly, or a laminated glazing assembly, comprising at least one substrate (1) as claimed in any one of the preceding claims~~ claim 1.

Claim 19 (Currently Amended): A process for deposition on a substrate, comprising: ~~(1), in which~~ depositing at least one dielectric thin-film layer is ~~deposited~~ on the substrate by sputtering, ~~especially magnetically enhanced sputtering and preferably reactive sputtering in the presence of oxygen and/or nitrogen~~, in a sputtering chamber-(2), with exposure to at least one ion beam (3) coming from an ion source-(4), ~~characterized in that wherein~~ an ion beam is created in the sputtering chamber using a linear source and in that the refractive index of said dielectric layer exposed to the ion beam can be adjusted according to parameters of the ion source.

Claim 20 (Currently Amended): The process as claimed in claim 19, ~~characterized in that~~ wherein an oxygen ion beam is created.

Claim 21 (Currently Amended): The process as claimed in claim 19-~~or 20~~, ~~characterized in that~~ wherein an ion beam is created with an energy of between 200 and 2000 eV, ~~or even between 500 and 5000 eV.~~

Claim 22 (Currently Amended): The process as claimed in ~~any one of claims 19 to 21, characterized in that claim 19, wherein~~ the density of the dielectric layer deposited on the substrate by sputtering with exposure to the ion beam is preserved.

Claim 23 (Currently Amended): The process as claimed in ~~any one of claims 19 to 22, characterized in that claim 19, wherein~~ the refractive index of the dielectric layer exposed to the ion beam is lowered relative to the index of this layer deposited without the ion beam.

Claim 24 (Currently Amended): The process as claimed in ~~any one of claims 19 to 22, characterized in that claim 19, wherein~~ the refractive index of the dielectric layer exposed to the ion beam is increased relative to the index of this layer deposited without the ion beam.

Claim 25 (Currently Amended): The process as claimed in ~~any one of claims 19 to 24, characterized in that claim 19, wherein~~ the exposure to an ion beam takes place simultaneously with the deposition of the layer by sputtering.

Claim 26 (Currently Amended): The process as claimed in ~~any one of claims 19 to 25, characterized in that claim 19, wherein~~ the exposure to an ion beam takes place sequentially after the layer has been deposited by sputtering.

Claim 27 (Currently Amended): The process as claimed in ~~any one of claims 19 to 26, characterized in that claim 19, wherein~~ an ion beam is directed onto the substrate (1), especially along a direction making a nonzero angle with the surface of the substrate, preferably along a direction making an angle of 10 to 80° with the surface of the substrate.

Claim 28 (Currently Amended): The process as claimed in ~~any one of claims 19 to 27, characterized in that claim 19, wherein~~ an ion beam is directed onto at least one cathode, ~~especially along a direction making a nonzero angle with the surface of the cathode, preferably along a direction making an angle of 10 to 80° with the surface of this cathode.~~

Claim 29 (Currently Amended): The process as claimed in ~~any one of claims 19 to 28, characterized in that claim 19, wherein~~ the dielectric layer is based on zinc oxide.

Claim 30 (Currently Amended): The process as claimed in ~~any one of claims 19 to 29, characterized in that claim 19, wherein~~ an ion beam (3) is created in the sputtering chamber (2) from a linear ion source (4) simultaneously with the deposition of the layer by sputtering and in that the deposited layer then undergoes an additional treatment with at least one other ion beam.

Claim 31 (Currently Amended): An installation (10) for deposition on a substrate (1), ~~especially a glass substrate, for the manufacture of the substrate as claimed in any one of claims 1 to 17~~ ~~claim 1 or for the implementation of the process as claimed in any one of claims 19 to 30~~, which includes a sputtering chamber (2) in which wherein at least one dielectric thin-film layer is deposited on the substrate by sputtering, ~~especially magnetically enhanced sputtering and preferably reactive sputtering in the presence of oxygen and/or nitrogen~~, with exposure to at least one ion beam (3), ~~characterized in that it~~ wherein the substrate includes, in the sputtering chamber (2) at least one linear ion source (4) capable of creating at least one ion beam.

Claim 32 (Currently Amended): The installation (10) as claimed in ~~the preceding claim, characterized in that claim 31, wherein~~ a linear ion source is placed so as to direct an ion beam onto the substrate, ~~especially along a direction making a nonzero angle, preferably an angle of 10 to 80°, with the surface of the substrate.~~

Claim 33 (Currently Amended): The installation (10) as claimed in claim 31-~~or 32, characterized in that~~ wherein a linear ion source is placed so as to direct an ion beam onto at least one cathode, ~~especially along a direction making a nonzero angle, preferably of 10 to 80°, with the surface of this cathode.~~